

The Claims

1. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:
 - (a) generating the plurality of images in each of the plurality of cameras;
 - (b) stitching the plurality of images to form the combined image using a stitcher disguised as a virtual camera.
2. A method as claimed in claim 1, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
3. A method as claimed in claim 1, further comprising performing overlap calculations to determine overlap regions of the plurality of images, the overlap calculation being used for all subsequent pluralities of images from the plurality of cameras.
4. A method as claimed in claim 1, further comprising selecting a presentation style for the combined image.
5. A method as claimed in claim 3, further comprising selecting a presentation style for the combined image.
6. A method as claimed in claim 3, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
7. A method as claimed in claim 4, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.

8. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:
- 5 (a) generating the plurality of images in each of the plurality of cameras;
- (b) using a virtual camera to perform a stitching operation on the plurality of images to form the combined image.
9. A method as claimed in claim 8, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
- 10 10. A method as claimed in claim 8, further comprising performing overlap calculations to determine overlap regions of the plurality of images, the overlap calculation being used for all subsequent pluralities of images from the plurality of cameras.
- 15 11. A method as claimed in claim 10, further including:
- 20 (a) using the overlap calculations to perform colour correction in the plurality of images; and
- (b) maintaining the colour correction for all subsequent pluralities of images from the plurality of cameras.
- 25 12. A method as claimed in claim 10, further comprising selecting a presentation style for the combined image.
13. A method as claimed in claim 11, further comprising selecting a presentation style for the combined image.
- 30 14. A method as claimed in claim 11, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
- 35 15. A method as claimed in claim 12, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the

plurality of images into the combined image using a two dimensional search.

- 5 16. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:

 - (a) generating the plurality of images in each of the plurality of cameras;
 - 10 (b) warping each of the plurality of images into an intermediate co-ordinate; and
 - (c) stitching the plurality of images into the combined image using a two dimensional search, stitching being by a stitcher disguised as a virtual camera.
- 15 17. A method as claimed in claim 16, further comprising performing overlap calculations to determine overlap regions of the plurality of images, the overlap calculation being used for all subsequent pluralities of images from the plurality of cameras.
- 20 18. A method as claimed in claim 16, further comprising selecting a presentation style for the combined image.
- 25 19. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:

 - (a) generating the plurality of images in each of the plurality of cameras;
 - (b) performing overlap calculations to determine overlap regions of the plurality of images;
 - 30 (c) stitching the plurality of images to form the combined image, stitching being by a stitcher disguised as a virtual camera; and
 - (d) using the results of step (b) for all subsequent pluralities of images from the plurality of cameras.
- 35 20. A method as claimed in claim 19, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the

plurality of images into the combined image using a two dimensional search.

- 5 21. A method as claimed in claim 19, further comprising selecting a presentation style for the combined image.
22. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:
- 10 (a) generating the plurality of images in each of the plurality of cameras;
- (b) selecting a presentation style for the combined image; and
- (c) stitching the plurality of images to form the combined image in the presentation style, stitching being by a stitcher disguised as a virtual camera.
- 15 23. A method as claimed in claim 22, wherein stitching is by warping each of the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
- 20 24. A method as claimed in claim 22, further comprising performing overlap calculations to determine overlap regions of the plurality of images, the overlap calculations being used for all subsequent pluralities of images from the plurality of cameras.
- 25 25. A method of producing a combined video image from a plurality of video images each produced by one of a plurality of video cameras each having an image system for taking an image of the plurality of images, the method comprising:
- 30 (a) warping each of the plurality of video images into an intermediate co-ordinate;
- (b) determining overlap regions of the warped plurality of video images;
- 35 (c) stitching the warped plurality of video images to form the combined video image, stitching being by a stitcher disguised as a virtual camera; and

- (d) processing the combined video image for one or more of: display and storage.

- 26. A method as claimed in claim 25, further comprising performing overlap
5 calculations to determine overlap regions of the plurality of images, the overlap calculations being used for all subsequent pluralities of images from the plurality of cameras.
- 27. A method as claimed in claim 25, further comprising selecting a
10 presentation style for the combined image.
- 28. A method for providing a combined image from a plurality of images each produced by one of a plurality of cameras each having an image system for taking an image of the plurality of images, the method comprising:
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 - (a) generating the plurality of images in each of the plurality of cameras;
 - (b) performing overlap calculations to determine overlap regions of the plurality of images;
 - (c) using the overlap calculations to perform colour correction in
20 the plurality of images; and
 - (d) performing substantially the same colour correction for all subsequent pluralities of images from the plurality of cameras.
- 29. A method as claimed in claim 28, wherein stitching is by warping each of
25 the plurality of images into an intermediate co-ordinate, and stitching the plurality of images into the combined image using a two dimensional search.
- 30. A method as claimed in claim 28, further comprising selecting a
30 presentation style for the combined image.
- 31. A method as claimed in claim 28, wherein stitching is by a stitcher disguised as a virtual camera.
- 32. A method as claimed in claim 29, further comprising selecting a
35 presentation style for the combined image.

33. A method as claimed in claim 30, further comprising selecting a presentation style for the combined image.
- 5 34. A method as claimed in claim 29, wherein stitching is by a stitcher disguised as a virtual camera.
35. Apparatus for producing a combined image, the apparatus comprising:
 (a) a plurality of cameras each having an image system;
 (b) a stitcher for performing a stitching operation on a plurality of
10 images, each of the plurality of images being produced by one
 of the plurality of cameras, to produce the combined image;
 (c) the stitcher being disguised as a virtual camera.
36. Apparatus as claimed in claim 35, wherein each camera includes a buffer.
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37. Apparatus as claimed in claim 35, wherein the plurality of cameras is in a common body.
38. Apparatus as claimed in claim 35, wherein each of the plurality of cameras
20 is in a separate body.